# Performance Audit King County Procurement Practices for Brightwater Professional Design Engineering Services

King County Auditor's Office Susan Baugh, Principal Management Auditor Wendy K. SooHoo, Senior Management Auditor June 28, 2005



#### Brightwater Project Background

- Total capital project costs for the Brightwater Project are estimated at \$1.48 billion.
- The Brightwater Project includes a 36-million gallon per day treatment plant; conveyance facilities to carry wastewater to and from the plant; and a marine outfall to discharge treated wastewater.
- The Brightwater treatment facilities will serve 34 local sewer agencies that provide services to 1.3 million residents and businesses in King and south Snohomish counties.



#### **Audit Background and Conclusion**

- A 1996 West Point and Renton Wastewater Treatment audit identified unexplained and unwarranted costs.
- Taxpayer and ratepayer interests were not adequately represented.
- County established a centralized project control function to provide oversight of professional design engineering service procurement and contracting processes.
- This audit concludes that strengthened oversight of the county's procurement and contracting processes provides greater assurance that taxpayer and ratepayer interests are represented.



#### **Audit Conclusions** (Continued)

- Opportunities exist to further improve the county's current procurement and contracting practices to achieve best value.
- Increased interagency collaboration and external communications could facilitate the resolution of project scheduling and cost issues, and consideration of best practices to achieve effective county procurements.



#### **Audit Scope and Objectives**

- Evaluate reasonableness of compensation rates for select design engineering services;
- Determine reasonableness of planned and actual procurement schedules for design engineering services; and
- Research best practices in professional services procurements and identify opportunities for improvement.



#### **Summary of Recommendations**

- Assess and adjust compensation rates for engineering services periodically.
- Improve the timeliness of capital project delivery by collaborating on the development of project-specific procurement schedules.
- Establish an interagency task force and advisory group with local engineering firm representation to facilitate collaboration and communication to resolve issues and consider emerging best procurement and contracting practices.

6/28/05

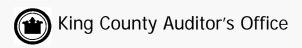


#### Analysis of Two Brightwater Projects

Our analysis focused on the procurements for two professional engineering services contracts:

- Predesign of the Brightwater conveyance system
- Final design of the Brightwater conveyance system

Design engineering services costs are approximately \$35 million of the total \$818.8 million conveyance system cost.



#### **Initiatives for Cost-Effective Contracts**

Since 1996, King County implemented practices to improve the cost-effectiveness of professional services contracts that included:

- Establishing salary cap for principal (high-level) engineers.
- Instituting standard fees for prime consultants and subconsultants.
- Ensuring that indirect costs based on audited rates are consistent with federal guidelines.



#### Local Engineering Firms' Interests

Local engineering firms expressed interest in improved county procurement and contracting processes, including:

- Increased compensation for professional engineering services.
- More timely procurement, negotiations, and contracting processes.



#### **Compensation Analysis**

- The county's approach in determining composite hourly rates (including direct and indirect costs, fees, and profits) were consistent with federal guidelines and industry practices.
- Reduced compensation, profits, and fees resulted in more cost-effective contracts.
- Composite, mid-range rates for direct and indirect costs, fees and profits were at the average for the 11 surveyed public agencies and water utilities.



## **Mid-Range Compensation Rates**

Agency	Mid-Range Estimate	Difference from Average (\$165)
Washington State Dept of Transportation	\$195	\$30
Los Angeles Sanitation	\$188	23
East Bay Municipal Utility District (Oakland)	\$176	11
Sound Transit	\$173	8
Denver Metro	\$173	8
King County	\$165	
Portland Clean Water Services	\$165	
City of Portland	\$164	-1
City of San Diego	\$155	-10
City of Dallas	\$150	-15
Seattle Public Utilities	\$148	-17
City of Phoenix	\$133	-32



#### **Scheduling Analysis**

The suggested county timeframe for procuring professional engineering services for complex projects was 199 days.

- Actual timeframe was 200 days to procure the conveyance system predesign contract.
- Actual timeframe was 323 days to procure the conveyance system final design contract.
- Factors contributing to contract delays included unique joint venture arrangement, the magnitude of the scope of work, cost analysis issues, and insurance requirements.



#### **Best Practices Analysis**

Based on our review of best practices, we determined that opportunities exist for further procurement process improvements.

- Examples include broadening representation of internal and external stakeholders to foster team environment in procuring professional services contracts.
- Utilizing a more broadly represented task force or advisory committee as a forum to resolve recurring issues and consider new best practice initiatives, such as postproject evaluations and performance-based fees.



### **Executive Response**

- Concurred with audit recommendations.
- Provided schedule for implementation of audit recommendations.



#### Acknowledgement

The King County Auditor's Office acknowledges the:

- Wastewater Treatment Division for time and cooperation during the audit review.
- Procurement and Contract Services Section in the Finance and Business Operations Division for its professional assistance throughout the audit process.